IN THE SPECIFICATION:

Please replace line 14 on page 15 of the specification with the following line of text:

[[14]]13 SMT resistor 4k7 0.125w 5% tolerance

Please replace line 7 on page 16 of the specification with the following line of text:

1 op amp (U3) TS931 ILT (ST Microelectronics)

Please replace line 11 on page 16 of the specification with the following line of text:

5 Transducers (50)

Please replace the paragraph beginning and ending on line 5 of page 9 with the following two amended paragraphs:

Figure 9A is a schematic diagram of ~~the remaining~~ a section of the USB device;

Figure 9B is a schematic diagram of another section of the USB device;

Please replace the paragraph beginning on line 8 of page 11 with the following amended paragraph:

In use, a user navigates through a G. U.I. of the software suite on a VDU (15,25) using the control panel 48 and assigns specific files stored on the store to one or more control members 42,44, 45 46. Additionally, the user may apply various effects to either or both of the limited state control members 44 and the dynamic range state control members 42, 45 46 which is more fully explained with reference to Figures 10 to 19 below. Once file and effect assignments are made, the user strums the guitar 41 and each string 42 vibrates up through its own transducer disposed on the housing 43. The transducers convert the mechanical vibrations to an electrical signal and forwards the electrical signal to a USB interface unit (see Figures 8 [[and 9]], 9A and 9B). The USB transmits the signals to the central control unit (2,12, 22) and in particular to the software suite stored thereon. In response to electrical signals from the guitar (3,14, 24,41), the software opens a file containing a variety ofsounds/images stored digitally and produces an output via connected speakers or V. D. U's.

Please replace the paragraph beginning on line 1 of page 12 with the following amended paragraph:

Referring to the drawings and now to Figures 8 [[and 9,]], 9A and 9B, there is shown a control unit of the digital musical instrument, namely a USB (Universal Serial Bus) implementation of the interface hardware for the Interactive Multimedia apparatus (1,11, 21), combined with a custom-designed suite of software running on a central control unit (2,12, 22), which will provide the user with the facility to render the full range of instrumental chords by selection of pre-assigned control members (42,44, 45,46) and the simultaneous activation of an individual control member string (42) or a plurality of string control members (42).

Please replace the paragraph beginning on line 20 of page 12 with the following amended paragraph:

Figure 8 and ~~Figure 9~~ Figures 9A and 9B show the schematic drawings for the USB (Universal Serial Bus) Interactive Multimedia apparatus (1,11, 21). The explanation of the circuit and its operation are as follows:

Please replace the two sequential paragraphs beginning on line 4 of page 18 of the specification and ending on line 20 of page 18 with the following two amended paragraphs:

Particular attention should be drawn to Figure 9B, Label K1. The schematic shows the circuit for a standard multi-pole transducer K1 which provides a single output energy source irrespective of the fact that one or any combination of strings 42 are activated. In contrast, this [[This]] invention uniquely specifies the use of a plurality of individual, uncoupled, isolated transducers that will only be energised by the activation of the individual string 42 directly associated with that string.

Each transducer output is associated with a single string and is ~~would be~~ connected to a separate pin on the CPU, in a similar fashion to that described in the schematic Figure 8, and Figures 9A and 9B ~~and Figure 9~~, which are shown as example only. The CPU would perform an analogue to digital conversion (A/D) on the sampled input. In the situation where sufficient A/D resources are not available on the CPU an external A/D converter would be

required. Another alternative would be to bank switch groups of inputs, be they analogue (e.g. Transducer output) or digital (e.g. Push button). For example, assuming there is a requirement to read 16 analogue inputs, these inputs could be connected to a multiplexing device whose 8 output pins are connected to the CPU. Another pin from the CPU would control (bank switch) which bank of 8 inputs are directed to the CPU.

Please replace the paragraph beginning on line 22 of page 18 of the specification with the following amended paragraph:

The two foot-pedal jack sockets J1 and J2 shown in Figure 9A and described in the schematic workings will allow users to dynamically modify a variable control, for example volume, pan or special effect parameters controls as described later in this application. The individual transducers (magnetic pick-ups) are one method of detecting string 42 vibrations. The invention is not limited to the use of any specific tranducer type such as piezo crystal, piezo film, piezo ceramic opto-detection methods, pressure sensing, movement detection et al. could also provide acceptable solutions for sensing the vibrations, and amplitude of the vibrations. The preferred type of transducer is a piezo-electric transducer selected from a group consisting of piezo-electric crystal transducers, piezo-electric ceramic transducers and piezo-electric film transducers.

Please replace the paragraph beginning on line 23 of page 22 of the specification with the following amended paragraph:

Accordingly, if the user wishes to render a chord, for example the chord `C`, the user would firstly select the instrument file as shown in Figure 11 Label [[A]] A1 and then select the chord `C` from the chord store for the selected instrument type, see Figure 10 Label A. The user would then be presented with a drop down menu of all the C chord variations held in the store, for example purposes only see Figure 10 Label A. The user may wish to select the major chord, Figure 10 Label B, which contains the notes C, E, G. The chosen chord must then be assigned to a control member, see Figure 5, reference numeral 44, which will select that chord when the user activates that control member 44. The chord assigned to that control member 44 will be rendered by the software when the user activates the strings 42 of the Interactive Multimedia apparatus (1, 1, 21). The software will have automatically assigned the notes of the selected chord to the appropriate strings 42 of the interactive multimedia

apparatus (1, 11, 21) so that the individual transducer associated with each string 42 will detect the user's actions in striking the string 42 and provide an audio output for the associated assigned note that will faithfully represent the response to the user's actions.

Please replace the two sequential paragraphs beginning on line 11 of page 23 of the specification with the following amended paragraphs:

The user can assign chords and special effects to the control members 44, which for example purposes only will be illustrated as follows; the user will select from a window, see Figure 12 Label A2, the particular chord they wish to assign to a control member 44. The user is then presented with a menu as shown in Figure 13. The user must select the device type from a plurality of devices, as shown in Figure 13 Label A3. For example purposes only we show a guitar-type device called the `PikAx` in Figure 13 Label A3. The user must then select the device number they wish to be configured, see Figure 13 Label B3. This application allows for a plurality of devices in each class of device and for a plurality of different device classes. The user will then select from a drop-down menu, see Figure 13 label C3, containing various control member identifier options. The user specifies which control member they wish to assign the selected chord to. For example purposes only, we show in Figure 13 Label C3, the control member being identified as Switch 10, See Figure 5, reference numeral 44. The user will then select the electrical state the control member 44 must reach to be in the state of assertion for the selection of the assigned chord, as shown for example purposes only in Figure 14 Label A4. The drop-down menu as show in Figure 14 Label A4 illustrates for example purposes only, four conditions of assertion--`when pressed`, `when released`, `while pressed` and `while released`. The user will then select the triggering method for the control member, see Figure 14 Label B4, which when asserted will provide the stimulus to the software to render the notes of the chord in direct response to the software's interpretation of the control members vibrations or activations. In some device class types, the activation source may not be a vibrating mechanism, but some other pressure sensing device, an opto-coupled device or any other transducer, which provides an electrical output in response to a user's actions.

In this example we show in Figure 14 Label B4 that a vibration sensitive transducer is the selected activation device for triggering the notes of the assigned chord. The user may wish to

adjust various effects, controls, characteristics or parameters of the sound output by using either a fixed or adjustable control member (42, 44, 45, 46). In Figure 15, we show for example purposes only, a range of controls that the user may wish to adjust dynamically by using one of the dynamic range state control members (42, 45, 46) shown in Figure 19 Label A8 or by using any of the limited state control members 44 shown in Figure 13 Label C3. The user may wish to increase the output volume, see Figure 15 Label A5; the pan control, see Figure 15 Label B5; the tempo, see Figure 15 Label C5 or any other control or parameter they may consider is desirable to adjust dynamically. In this example, for a limited [[sate]] state control member 44, the user will assign the selected control member 44 for the control adjustment by selecting from the drop-down menu, Figure 15 Label [[B]]D and then selecting the assertion state for that control member Figure 15, Label E and then selecting the percentage adjustment they wish to apply, Figure 15 Label F and also the rate of change in milliseconds at which they wish to apply the change, Figure 15 Label G. Similarly to reduce the volume, pan, and tempo the user selects and assigns the controls as shown in Figure 15 Label H, J, K, L.

Please replace the paragraph beginning on line 22 of page 24 of the specification with the following amended paragraph:

When using an adjustable control member (42, 45, 46), the user will select and assign the appropriate control members, Figure 15, Label M, N, P. The user may wish to mute the output by selecting and assigning the control member and their assertion states, see Figure 15 Label R and S. The user may wish to restore the original settings by selecting and assigning a control member, see Figure 15 Label T and V. Another significant and unique component of this application is the ability of the software to dynamically and in real time, adjusts the individual parameters of a special effect, which is being applied to an individual note or notes of the selected chord, while it is being rendered by the central control unit. In this application and for example purposes only, we show in Figure 16 Label A6, a range of special effect choices from which the user may select and which they may apply dynamically to a chord or note or a combination of notes. In this example, we show that the user has selected `flanger`, see Figure 16 Label B6. Figure 17 shows, as example only, some of the key parameter adjustments that affect the generation of the `flanger` special effect. The user may adjust any or all of these parameters to provide a composite sound effect of their choice. Additionally

the user may wish to dynamically adjust in real-time during their playing activity any or all of the individual parameters to create contrasting sound effects. The user sets the individual slider controls for each parameter as in Figure 17 to provide the composite sound effect results they desire. The user will then assign the parameters they wish to adjust dynamically and in real-time as follows; the user wishes to adjust a parameter of the `flanger` special effect and to have the selected parameter immediately activated in response to their operation of an adjustable control member. (42, 45, 46) Figure 18 Label A7 shows a selection box, which when selected will tell the software to automatically apply the adjustments when the selected control member is activated. Figure 18 Label B7 shows a drop-down menu containing the individual parameters of the special effect being applied as in Figure 17. The user selects the individual parameter they wish to dynamically adjust and in this example it is the frequency. The user will then assign the adjustable control member they desire as the trigger mechanism, see Figure 19 Label A8. In this example, it is a foot-pedal. Additionally there is allowance, as in Figure 19 Label B8, for the user to select a minimum threshold level before the adjustable control member (42, 45, 46) kicks in. Setting this minimum threshold level in the activation of the parameter adjustment allows for differing tolerances in the electrical properties of proportional potentiometers and other proportional measurement devices.